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(54) Title: APPARATUS AND METHOD FOR PORTAL DEVICE AUTHENTICATION

100
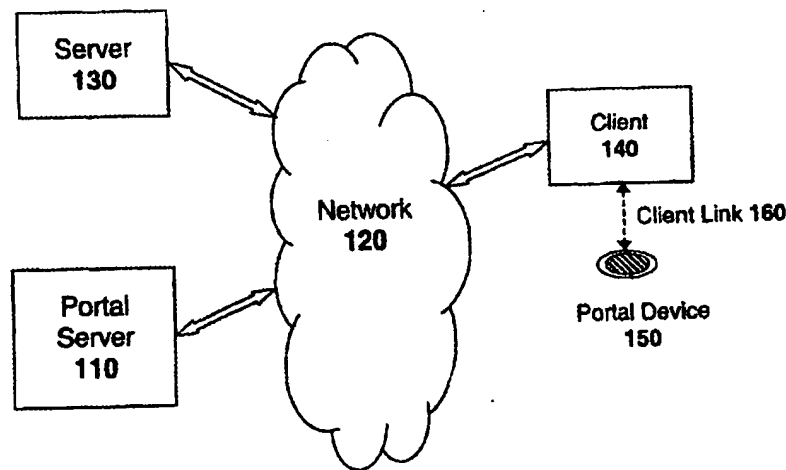
(57) Abstract: A method is described, comprising: searching for portable device software configured on a client (Fig. 1, 140); automatically installing the portable device software (Fig.1, 150) if the portable device software is not configured on the client; searching for a portable device attached to the client; and logging in a user of the portable device upon identifying the portable device (Fig.2, 150).

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APPARATUS AND METHOD FOR PORTAL DEVICE AUTHENTICATION

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates generally to the field of network data services. More particularly, the invention relates to an apparatus and method for managing network portal data.

Description of the Related Art

"Portals" are World Wide Web ("WWW") sites which help users manage and navigate through vast amounts of information stored on the Internet. Some well known Internet portals include "Yahoo!®," AltaVista®, and Excite®. Portals typically provide search features which allow users to search for particular types of content by entering keywords. In response to the keyword search request, the portal returns links to relevant Internet sites and/or relevant content stored directly on the portal. For example, if a user enters the keyword "snowboarding," the portal may return a list of hyperlinks to Internet sites related to snowboarding as well as internal portal categories related to snowboarding (e.g., "Recreation > Sports > Snowboarding").

In addition to the keyword search and content management capabilities described above, portals may also provide users with a variety of network applications such as, for example, email, electronic scheduling and contact management, chat groups, newsgroups, personal financing, and instant messaging, to name just a few.

Many portals also provide a registration feature which allows users to customize the types of information and/or applications which will be immediately accessible to the user on the portal. For example, the user may configure the portal to automatically retrieve and display information specified by the user such as, for example, the value of the user's stock portfolio, the weather forecast in the user's geographic location, an indication of any unread email messages, the user's appointments for the day, the local news headlines for the day, and/or the television listings for the user's favorite channels . that evening.

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When the user visits the portal (e.g., via a client computer), he/she may be presented with a single Web page that contains all of the foregoing information, automatically collected and transmitted by the portal. Typically, a portal will transmit a unique Web page and associated data to the user in this manner only after receiving proper authentication (e.g., user ID and password).

SUMMARY OF THE INVENTION

A method is described, comprising: searching for portable device software configured on a client; automatically installing the portable device software if the portable device software is not configured on the client; searching for a portable device attached to the client; and logging in a user of the portable device upon identifying the portable device.

BRIEF DESCRIPTION OF THE DRAWINGS

A better understanding of the present invention can be obtained from the following detailed description in conjunction with the following drawings, in which:

FIG. 1 illustrates an exemplary network architecture used to implement elements of the present invention.

FIG. 2 illustrates another exemplary network architecture used to implement elements of the present invention.

FIG. 3 illustrates a radio signal including its sub-carrier in the frequency domain.

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microcontroller/CPU. In addition, this configuration allows portal devices 150 with
different CPUs to coexist and execute the same microprograms. Moreover,
programming frequently-used routines in the ROM toolbox module 530 reduces the
size of microprograms stored in the external memory 550, thereby conserving memory
and bandwidth over the client link 160 and/or the RF link 220. In one embodiment,
new interpreter modules 520 and/or toolbox routines 530 may be developed to execute
the same microprograms on cellular phones, personal information managers ("PIMs"),
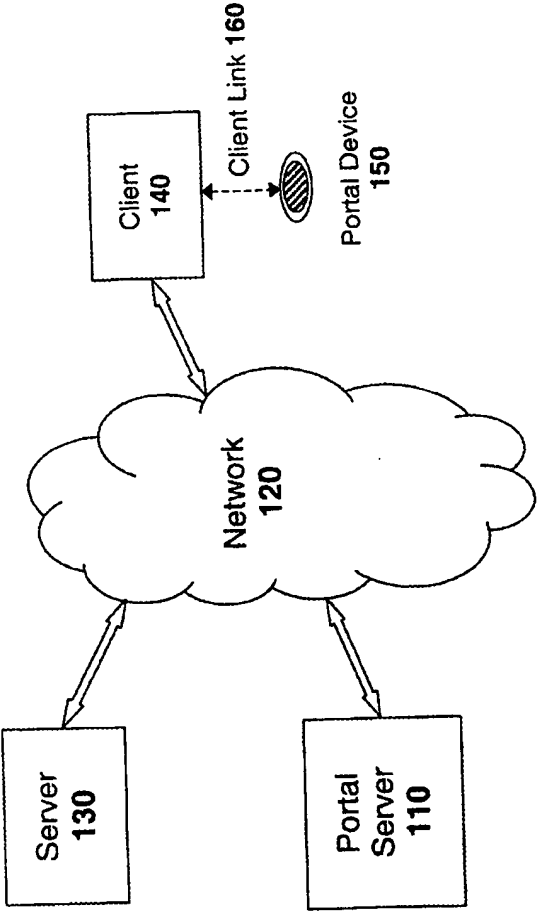or any other device with a CPU and memory.

One embodiment of the ROM 570 may be comprised of interpreted code as well
as native code written specifically for the microcontroller CPU 505. More particularly,
some toolbox routines may be written as interpreted code (as indicated by the arrow
between the toolbox 530 and the interpreter module 520) to conserve memory and
bandwidth for the same reasons described above with respect to microprograms.
Moreover, in one embodiment, data and microprograms stored in external memory 550
may be configured to override older versions of data/microprograms stored in the ROM
570 (e.g., in the ROM toolbox 530).

Data Compression

As described above, microprograms and portal data may be transmitted to the
portal device 150 in a compressed format. As such, in one embodiment, decompression
logic is programmed into the microcontroller ROM 570 (e.g., within the toolbox 530)
and is used to interpret and/or decompress the microprograms/data as they are received.

In one embodiment, a plurality of uncompressed data is stored in the ROM 570,
and codes identifying the uncompressed data are transmitted across the RF link 220
and/or client link 160. For example, instead of transmitting the entire market code for a
particular stock, such as "MSFT" for Microsoft, a compressed code, e.g., "M," may be
transmitted to the portal device 150 instead. The ROM 570 in this embodiment may
include a lookup table (or similar decode logic) for retrieving the real market code
"MSFT," using the compressed code, "M." Once the real code is retrieved from the
ROM 570, it may be displayed on the portal device 150 as illustrated in **Figure 4**. It
should be noted, however, that the underlying principles of the invention may be
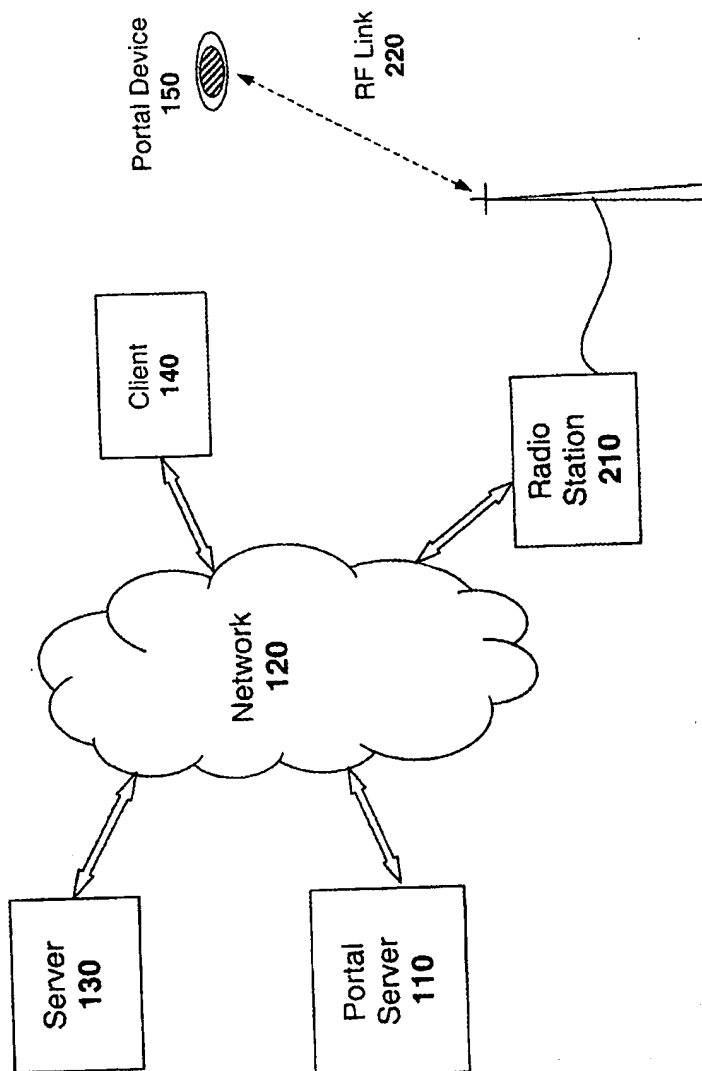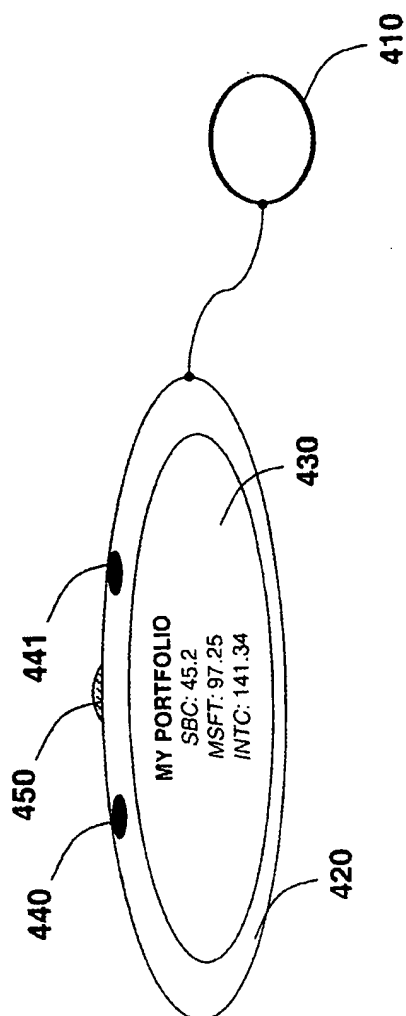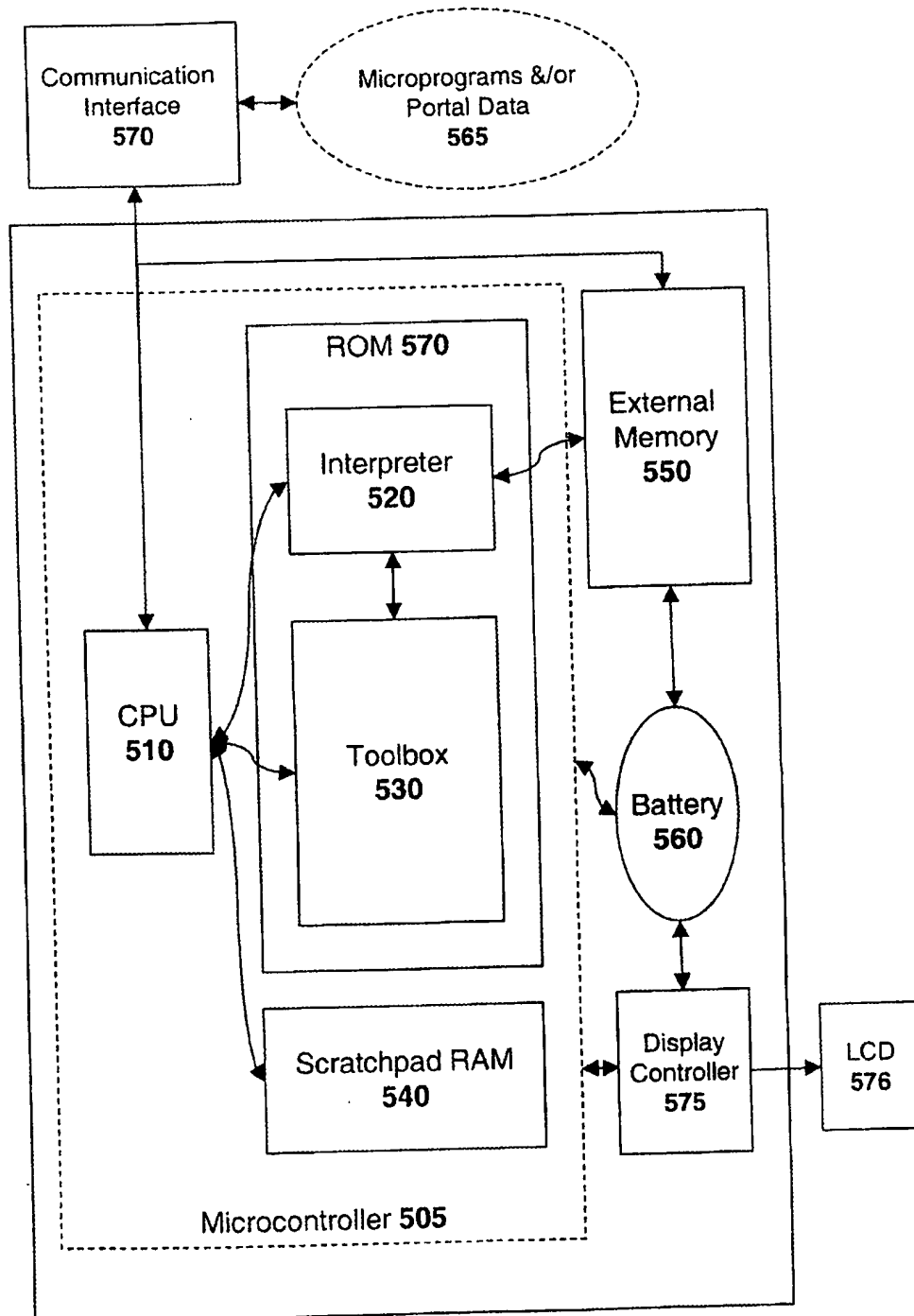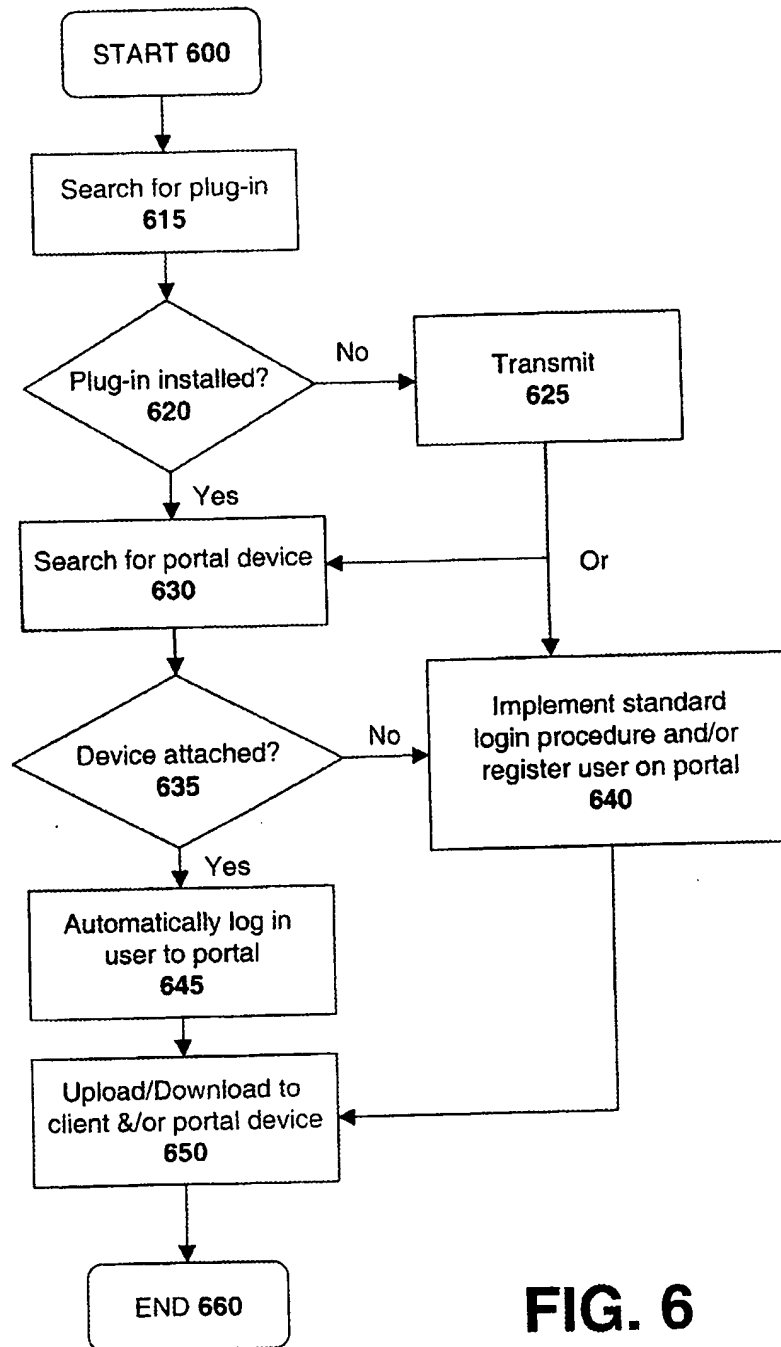practiced using a variety of coding schemes and/or digital compression techniques.

FIG. 1

Client Link 160

Client
140

Portal Device
150

Network
120

Server
130

Portal
Server
110

100

FIG. 2

MY PORTFOLIO
SBC: 45.2
MSFT: 97.25
INTC: 141.34

410

430

441

450

440

420

FIG. 4

FIG. 5

6/8

START 600

↓

Search for plug-in
615

↓

Plug-in installed?
620 ——No——→ Transmit
625

│Yes

Search for portal device
630 ←——— Or

↓

Device attached?
635 ——No——→ Implement standard login procedure and/or register user on portal
640

│Yes

Automatically log in user to portal
645

↓

Upload/Download to client &/or portal device
650 ←———

↓

END 660

FIG. 6

Portal Programming

| | STOP | Home | ↑ ○ | Print | Edit |

Image [path/file]
710

Move/Scroll Image
720

Fade image/music
720

Music [path/file]
715

Play Music
725

Temporal link
722

FIG. 7

Key No. 5331998TW

KEY OPERATIONS
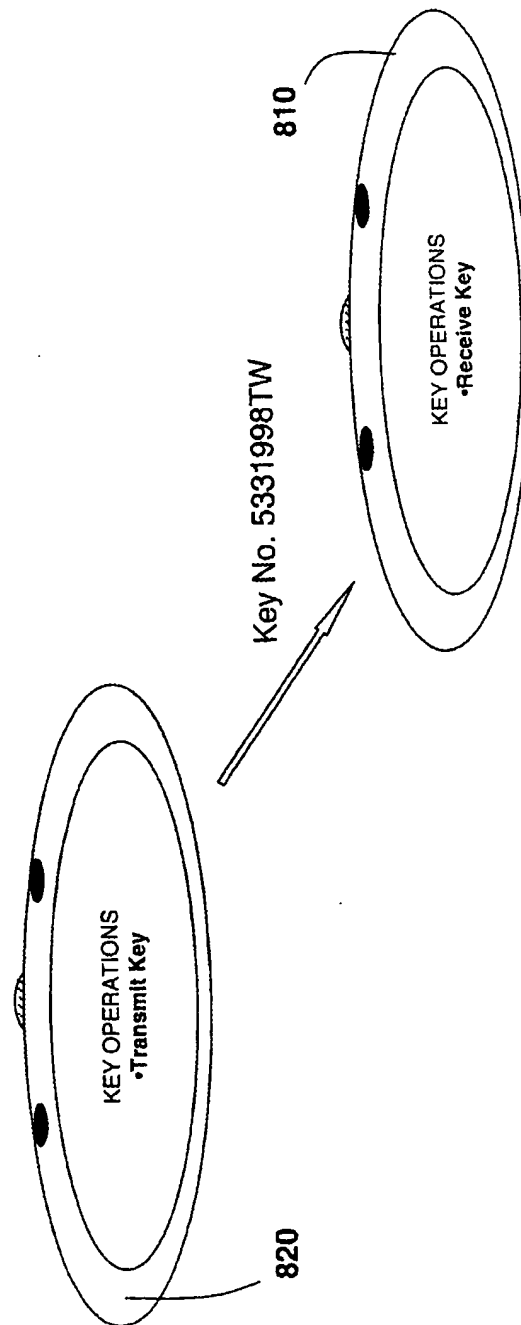•Transmit Key

820

KEY OPERATIONS
•Receive Key

810

FIG. 8

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/02268

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 9/445

US CL : 717/11

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 717/1,11,709/200,395/200,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,964,830 A (DURRETT) 12 OCTOBER 1999 (12.10.1999), see col. 1-10	1-19
X	US 5,915,095 A (MISKOWIEC) JUNE 22, 1999 (22.06.1999), see col. 2-22	1-19
XP	WO 00/30003 A (KRISHAN ET AL.) MAY 22, 2000 (22.05.2000), see pages 1-59	1-19

☐ Further documents are listed in the continuation of Box C.   ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date		
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/US	Authorized officer
Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Mark R. Powell
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